

REMARKS

Claims 1-8 are pending in the Application. Claim 3 has been amended to clarify the claim. Reconsideration and allowance of Application based on the following remarks are respectfully requested.

Claim Objections

Claim 3 is objected to for failing to provide proper antecedent basis. “[T]he word not representing the color” has been changed to “a word not representing the color” in order to clarify the claim. Applicants respectfully assert that the amendment to claim 3 overcomes the antecedent basis objection.

Claim Rejections under 35 U.S.C. § 103

Claims 1-3, and 5-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hermes et al., “Image Retrieved for Information Systems,” (“Hermes”), in view of Liu et al. U.S. Pat. 6,970,860 (“Liu”). Applicants respectfully traverse the rejection in view of the following arguments.

The Office Action states that the limitation of claim 1 “a color/shape threshold retrieving means for retrieving the color histograms and the edge information corresponding to the analyzed words from the color/shape threshold storing means and retrieving an image satisfying the retrieved color histograms and edge information” is taught by “query processing that retrieves an image corresponding to color and edge information in the IRIS system.” (Hermes, Pages 403-404, Section 3, and Fig. 8).

Applicants respectfully disagree. Hermes is expressly limited by “A query is exclusively based on the text annotations and thereby the response time is minimized.” (Hermes, page 396). This means that in Hermes images are analyzed and then text annotations are associated with the image. The images with the text annotations are then stored in a database. So, a query in Hermes with “blue” would search for images with the annotation “blue.” (Hermes pages 401-403). In contrast, a query in the claimed invention includes “the retrieved color histograms and edge information.” (Application, claim 1). For example, a query with “blue” (“analyzed words”, claim 1) would result in a histogram being retrieved for “blue” (“for retrieving the color histograms ...

corresponding to the analyzed words”, claim 1), and then the retrieved color histogram for “blue” would be used to retrieve images satisfying the color histogram for “blue” (“retrieving an image satisfying the retrieved color histograms”, claim 1). For the reasons stated above, Applicants contend that the limitation “a color/shape threshold retrieving means for retrieving the color histograms and the edge information corresponding to the analyzed words from the color/shape threshold storing means and retrieving an image satisfying the retrieved color histograms and edge information” is not taught by Hermes.

Applicants note that using histograms has advantages over Hermes. For example, using histograms with threshold values (Application page 8, lines 21-23) to store the images allows many additional features, such as the use of phrases to describe a color. For example, “strongly red color” (Application, page 10, line 7) where the adverb “strongly” is used to modify the histogram for “red”, and the resulting histogram is then used to search for images satisfying the resulting color histogram (page 11, lines 5-7). The use of histograms also allows for an image to have threshold values associated with the histogram so that the search for images “satisfying the retrieved color histograms” (claim 1) can be fuzzy (Application, page 12, line 10). Therefore, the use of histograms by the claimed invention offers advantages over Hermes.

The Office Action admits on page 4 that Hermes does not teach a means for analyzing a natural language sentence. The Office Action asserts that Liu remedies these limitations by teaching that matching of extracted keywords to histogram information associated with an image is taught at Col. 6, lines 38-58.

Applicants respectfully disagree. Liu does not teach using histograms for text queries as the claimed invention does. Liu teaches only using a color histogram and shape information for matching an “example object submitted by the user” with stored objects (Liu, Col. 6, Lines 49-50). But, for text queries Liu teaches that a semantic matcher identifies objects with associated keywords that match keywords in the query. The semantic matcher of Liu then uses a semantic network to locate those objects with links to the search keywords. The objects with the higher weights are retrieved. (Liu, Col. 6, Lines 52-58). In contrast, the claimed invention does not use example objects, but rather text queries that use histograms. (Application, Fig. 3, page 11-12). Therefore, Applicants respectfully contend that Liu does not teach a means for analyzing a natural language sentence as claimed by Application.

The Office Action contends on page 5 that “it would have been obvious to a person of ordinary skill in the art, at the time of the invention, to modify the teachings of Hermes with the natural language sentence parsing elements taught by Liu in order to provide a means for better understanding and identifying search terms in an image retrieval process.” But, Applicants contend that Hermes teaches away from adding such additional functionality as Hermes states as a subordinate goal of the system that “short response times for the queries has to be postulated.” The addition of Liu to Hermes would be against this goal as natural language processing systems at the time of the invention required large processing power and slowed systems down. Therefore, Applicants contend there is no proper motivation to combine Liu with Hermes. Further, Applicants contend that since Liu requires that the user of the system provide feedback as to whether objects are relevant or not to the query (Liu, Abstract) that this requirement for the user is directly against the first goal of Hermes, “1. The images should be processed automatically.” (Hermes, page 395). For the above reasons, Applicants respectfully contend that Hermes teaches away from combining Liu; therefore, there is no proper motivation to combine Liu with Hermes. A prima facie case of obviousness may be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997) and MPEP 2144.05.

The rejections of claims 5 and 7 are traversed for similar reasons as stated above for claim 1. Because claims 2-4 depend from claim 1, claim 6 depends from claim 5, and claim 8 depends from claim 7, Applicant respectfully traverses the rejections for claims 2-4, 6, and 8 for the same reasons as given above for claims 1, 5 and 7.

CONCLUSION

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and a Notice to that effect is solicited.

Should any questions remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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